

ABSTRACT

A semiconductor device includes an electronic circuit, a metal guard ring surrounding the electronic circuit, and a passivation layer covering the electronic circuit and guard ring. The passivation layer has a slot extending from the surface of the device down to the guard ring. The slot prevents cracks that may form in the passivation layer at the edges of the device from propagating to the area inside the guard ring. Locating the slot over the guard ring enables the size of the device to be reduced, and enables the guard ring to keep moisture and contaminants that enter the slot from reaching lower layers of the device.